

IN THE CLAIMS

This version of the claims replaces and supercedes all prior versions of the claims.

1. (Currently Amended) A method for enabling a first communications system and a second communications system, respectively located behind a first firewall and a second firewall, to directly communicate with each other, wherein ~~each of said first and second firewalls respectively~~ firewall prevents communication initiated from an external data network from reaching said first ~~or second~~ communications system and said second firewall prevents communication initiated from said external data network from reaching said second communication system, said method comprising:

establishing a first secure connection via said external data network between said first communications system and a central communications station through said first firewall, wherein said first secure connection is initiated by said first communications system thereby being allowed to pass through said first firewall;

establishing a second secure connection via said external data network between said second communications system and said central communications station through said second firewall, wherein said second secure connection is initiated by said second communications system thereby being allowed to pass through said second firewall;

forwarding connection information ~~of~~ for said second communications system to said first communications system via said first secure connection using said central communications station; and

transmitting data directly from said first communications system to said second communications system, wherein said data uses said connection information ~~of~~ for said second

communications system as its destination information and uses connection information for said central communications station as its source information, ~~so as to appear as if it had originated~~ said data originating from said first communications system appearing to originate from said central communications station.

2. (Original) The method of claim 1, wherein said connection information for said second communications system includes Internet protocol address and port of said second communications system and wherein said connection information for said central communications station includes Internet protocol address and port of said central communications station.

3. (Currently Amended) The method of claim 1 further comprising:

forwarding connection information ~~at for~~ said first communications system to said second communications system via said second secure connection using said central communications station; and

transmitting data from said second communications system to said first communications system, wherein said data uses said connection information ~~of for~~ said first communications system as its destination information and uses connection information for said central communications station as its source information, ~~so as to appear as if it had originated~~ said data originating from said second communications system appearing to originate from said central communications station.

4. (Original) The method of claim 3 wherein said connection information for said first

communications system includes Internet protocol address and port of said first communications system.

5. (Currently Amended) A method for enabling a first communications system and a second communications system, respectively located behind a first firewall and a second firewall and having respective associated first and second network address translation devices, to directly communicate with each other, wherein ~~each of said first and second firewalls respectively~~ firewall prevents communication initiated from an external data network from reaching said first or ~~second communications system and said second firewall prevents communication initiated from~~ an external data network from reaching said second communications system and wherein each of said first and second network address translation devices respectively provides public source information for outbound data originated from said first and second communications systems, said method comprising:

establishing a first secure connection via an external data network between said first communications system and a central communications station through said first firewall, wherein said first secure connection is initiated by said first communications system thereby being allowed to pass through said first firewall;

establishing a second secure connection via said external data network between said second communications system and said central communications station through said second firewall, wherein said second secure connection is initiated by said second communications system thereby being allowed to pass through said second firewall;

transmitting first connection information for establishing a new connection with said first communications system, said transmitting being from said first communications systems-system

to said central communications station via said first secure connection;

transmitting second connection information for establishing a new connection with said second communications system, said transmitting being from said second communications system to said central communications station via said second secure connection;

forwarding said second connection information ~~for establishing new connection with said second communications system~~ to said first communications system via said first secure connection using said central communications station;

transmitting a connection request from said first communications system to said second communications system wherein said connection request uses said second connection information ~~for establishing new connection with said second communications system as its~~ second communications system destination information;

forwarding said first connection information ~~for establishing new connection with said first communications system~~ to said second communications system via said second secure connection using said central communications station;

transmitting connection acknowledgement and request from said second communications system to said first communications system wherein said connection acknowledgement and request uses said first connection information ~~for establishing new connection with said first communications system as its~~ first communications system destination information; and

in response to receiving said connection acknowledgement and request from said second communications system, transmitting a connection acknowledgement directly from said first communications system to said second communications system.

6. (Currently Amended) The method of claim 5 wherein:

said first connection information, ~~for establishing a new connection with said first~~
~~communications system~~ includes public Internet protocol address provided by said first network
address translation device and port for said first communications system's next connection; and

said second connection information ~~for establishing a new connection with said second~~
~~communications system~~ includes public Internet protocol address provided by said second
network address translation device and port for said second communications system's next
connection.

7. (Currently Amended) A system for enabling a first communications system and a second
communications system, respectively located behind a first firewall and a second firewall, to
directly communicate with each other, wherein ~~each of said first and second firewalls~~
~~respectively~~ firewall prevents communication initiated from an external data network from
reaching said first ~~or second~~ communications system and said second firewall prevents
communication initiated from said external data network from reaching said second
communication system, said system comprising:

a processor;

means for establishing a first secure connection via said external data network between
said first communications system and a central communications station through said first
firewall, wherein said first secure connection is initiated by said first communications system
thereby being allowed to pass through said first firewall;

means for establishing a second secure connection via said external data network between
said second communications system and said central communications station through said

second firewall, wherein said second secure connection is initiated by said second communications system thereby being allowed to pass through said second firewall;

means for forwarding connection information ~~of for~~ said second communications system to said first communications system via said first secure connection using said central communications station; and

means for transmitting data directly from said first communications system to said second communications system, wherein said data uses said connection information ~~of for~~ said second communications system as ~~its~~ destination information and uses connection information for said central communications station as ~~its~~ source information, ~~so as to appear as if it had originated~~ said data originating from said first communications system appearing to originate from said central communications station.

8. (Original) The system of claim 7 wherein said connection information for said second communications system includes Internet protocol address and port of said second communications system and wherein said connection information for said central communications station includes Internet protocol address and port of said central communications station.

9. (Currently Amended) The system of claim 7 further comprising:

means for forwarding connection information ~~of for~~ said first communications system to said second communications system via said second secure connection using said central communications station; and

means for transmitting data from said second communications system to said first

communications system, wherein said data uses said connection information of said first communications system as its destination information and uses said connection information for of said central communications station as its source information, so as to appear as if it had originated said data originating from said second communications system appearing to originate from said central communications station.

10. (Original) The system of claim 9 wherein said connection information for said first communications system includes Internet protocol address and port of said first communications system.

11. (Currently Amended) A system for enabling a first communications system and a second communications system, respectively located behind a first firewall and a second firewall and having respective associated first and second network address translation devices, to directly communicate with each other, wherein each of said first and second firewalls respectively firewall prevents communication initiated from an external data network from reaching said first or ~~second~~ communications system and said second firewall prevents communication initiated from an external data network from reaching said second communications system and wherein each of said first and second network address translation devices respectively provides public source information for outbound data originated from said first and second communications systems, said system comprising:

means for establishing a first secure connection via an external data network between said first communications system and a central communications station through said first firewall, wherein said first secure connection is initiated by said first communications system thereby

being allowed to pass through said first firewall;

means for establishing a second secure connection via said external data network between said second communications system and said central communications station through said second firewall, wherein said second secure connection is initiated by said second communications system thereby being allowed to pass through said second firewall;

means for transmitting first connection information for establishing a new connection with said first communications system, said transmitting being from said first communications system to said central communications station via said first secure connection;

means for transmitting second connection information for establishing a new connection with said second communications system, said transmitting being from said second communications system to said central communications station via said second secure connection;

means for forwarding said second connection information ~~for establishing new connection with said second communications system~~ to said first communications system via said first secure connection using said central communications station;

means for transmitting a connection request from said first communications system to said second communications system wherein said connection request uses said second connection information ~~for establishing new connection with said second communications system~~ as its second communications system destination information;

means for forwarding said first connection information ~~for establishing new connection with said first communications system~~ to said second communications system via said second secure connection using said central communications station;

means for transmitting connection acknowledgement and request from said second

communications system to said first communications system wherein said connection acknowledgement and request uses said first connection information ~~for establishing new connection with said first communications system as its first communications system~~ destination information; and

means for transmitting a connection acknowledgement directly from said first communications system to said second communications system in response to receiving said connection acknowledgement and request from said second communications system.

12. (Currently Amended) The system of claim 11 wherein:

said first connection information ~~for establishing a new connection with said first communications system~~ includes public Internet protocol address provided by said first network address translation device and port for said first communications systems next connection; and

said second connection information ~~for establishing a new connection with said second communications system~~ includes public Internet protocol address provided by said second network address translation device and port for said second communications system's next connection.

13. (Currently Amended) A system for enabling two communications system, located behind firewalls, to directly communicate with each other, said system comprising:

a central communications station;

a first communications system and a second communications system, wherein each of said first and second communications system comprises a respective secure connection interface that establishes a secure connection with said central communications station via an external data

network through a network access;

a first firewall and a second firewall respectively located between said external data network and said first and second communications systems, wherein ~~each of said first and second firewalls respectively~~ firewall prevents communication initiated from said external data network from reaching said ~~first or second~~ communications system and said second firewall prevents communication initiated from said external data network from reaching said second communications system; and

said central communications station comprises:

a secure connection interface that maintains secure connections with said first and second communications systems via said external communications network through a network access, and

a secure redirector that forwards connection information ~~of for~~ for said second communications system to said first communications system via said secure connection with said first communications system thereby enabling said first communications system to transmit data directly to said second communications system, wherein said data uses said connection information ~~of for~~ for said second communications system as its destination information and uses connection information for said central communications station as its source information, ~~so as to appear as if it had originated~~ said data originating from said first communications system appearing to originate from said central communications station.

14. (Original) The system of claim 13 wherein said connection information for said second communications system includes Internet protocol address and port of said second communications system and wherein said connection information for said central

communications station includes Internet protocol address and port of said central communications station.

15. (Currently Amended) The system of claim 13, wherein said secure redirector additionally forwards connection information ~~of~~ for said first communications system to said second communications system via said secure connection with said second communications system thereby enabling said second communications system to transmit data to said first communications system, wherein said data uses said connection information of said first communications system as its destination information and uses connection information ~~for~~ of said central communications station as its source information, ~~so as to appear as if it had originated~~ said data originating from said second communications system appearing to originate from said central communications station.

16. (Original) The system of claim 15 wherein said connection information for said first communications system includes Internet protocol address and port of said first communications system.

17. (Currently Amended) A system for enabling two communications system, located behind firewalls and having associated network translation devices, to directly communicate with each other; said system comprising:

a central communications station;

a first communications system and a second communications system, wherein each of said first and second communications system comprises:

a respective secure connection interface that establishes a secure connection with said central communications station via an external data network through a network access, and

a respective transmitter that transmits first connection information for establishing a new connection with ~~a respective one of said first and second communications system~~ to said central communications station via said secure connection and transmits second connection information for establishing another new connection with said second communications system to said central communications station via said secure connection;

a first firewall and a second firewall respectively located between said external data network and said first and second communications systems, wherein ~~each of said first and second firewalls respectively~~ firewall prevents communication initiated from said external data network from reaching said ~~first or second communications system~~ and said second firewall prevents communication initiated from said external data network from reaching said second communications system; and

a first network address translation device and a second network address translation device respectively associated with said first and second communications systems, wherein each of said first and second network address translation devices respectively provides public source information for outbound data originated from said first and second communications systems₁[[;]] wherein:

said central communications station comprises:

a secure connection interface that maintains secure connections with said first and second communications systems via said external communications network through a network access, and

a secure redirector that:

forwards said second connection information ~~for establishing new connection with said second communications system~~ to said first communications system via said secure connection with said first communications system thereby enabling said first communications system to transmit a connection request to said second communications system wherein said connection request uses said second connection information ~~for establishing new connection with said second communications system~~ as its second communications system destination information, and

forwards said first connection information ~~for establishing new connection with said first communications system~~ to said second communications system via said secure connection with said second communications system, thereby:

enabling said second communications system to transmit connection acknowledgement and request from said second communications system to said first communications system wherein said connection acknowledgement and request uses said first connection information ~~for establishing new connection with said first communications system~~ as its first communications system destination information, and enabling said first communications system to transmit a connection acknowledgement directly from said first communications system to said second communications system.

18. (Currently Amended) The system of claim 17 wherein:

said first connection information ~~for establishing a new connection with said first communications system~~ includes public Internet protocol address provided by said first network address translation device and port for said first communications system's next connection; and
said second connection information ~~for establishing a new connection with said second~~

~~communications system~~ includes public Internet protocol address provided by said second network address translation device and port for said second communications system's next connection.

19. (Currently Amended) A central communications station for enabling a first communications system and a second communications system, respectively located behind a first firewall and a second firewall, to directly communicate with each other, wherein ~~each of said first and second firewalls respectively~~firewall prevents communication initiated from an external data network from reaching said first ~~or second~~ communications system and said second firewall prevents communication initiated from an external data network from reaching said second communications system, said central communications station comprising:

a processor;

means for maintaining a first secure connection with said first communications system via said external data network through said first firewall, wherein said first secure connection is initiated by said first communications system thereby being allowed to pass through said first firewall;

means for maintaining a second secure connection with said second communications system via said external data network through said second firewall, wherein said second secure connection is initiated by said second communications system thereby being allowed to pass through said second firewall; and

means for forwarding connection information ~~of~~for said second communications system to said first communications system via said first secure connection thereby enabling said first communications system to transmit data to said second communications system, wherein said

data uses said connection information ~~of~~ for said second communications system as its destination information and uses connection information for said central communications station as its-source information, said data originating from said first communications system appearing to originate ~~so as to appear as if it had originated~~ from said central communications station.

20. (Original) The central communications station of claim 19 wherein said connection information for said second communications system includes Internet protocol address and port of said second communications system and wherein said connection information for said central communications station includes Internet protocol address and port of said central communications station.

21. (Currently Amended) The central communications station of claim 19 further comprising:
means for forwarding connection information ~~of~~ for said first communications system to said second communications system via said second secure connection thereby enabling said second communications system to transmit data to said first communications system, wherein said data uses said connection information of said first communications system as its-destination information and uses connection information for said central communications station as its source information, said data originating from said second communications system appearing to originate ~~so as to appear as if it had originated~~ from said central communications station.

22. (Original) The central communications station of claim 21 wherein said connection information for said first communications system includes Internet protocol address and port of said first communications system.

23. (Currently Amended) A central communications station for enabling a first communications system and a second communications system, respectively located behind a first firewall and a second firewall and having respective associated first and second network address translation devices, to directly communicate with each other, wherein ~~each of said first and second firewalls respectively~~firewall prevents communication initiated from an external data network from reaching said first ~~or second~~ communications system and said second firewall prevents communication initiated from an external data network from reaching said second communications system and wherein each of said first and second network address translation devices respectively provides public source information for outbound data originated from said first and second communications system, said central communications station comprising:

means for maintaining a first secure connection via an external data network with said first communications system through said first firewall, wherein said first secure connection is initiated by said first communications system thereby being allowed to pass through said first firewall;

means for maintaining a second secure connection via said external data network with said second communications system through said second firewall, wherein said second secure connection is initiated by said second communications system thereby being allowed to pass through said second firewall;

means for obtaining first connection information for establishing a new connection with said first communications system from said first communications systems via said first secure connection;

means for obtaining second connection information for establishing another new

connection with said second communications system from said second communications system via said second secure connection;

means for forwarding said second connection information ~~for establishing new connection with said second communications system~~ to said first communications system via said first secure connection thereby enabling said first communications system to transmit a connection request to said second communications system, wherein said connection request uses said second connection information ~~for establishing new connection with said second communications system~~ as its second communications system destination information; and

means for forwarding said first connection information ~~for establishing new connection with said first communications system~~ to said second communications system via said second secure connection, thereby:

enabling said second communications system to transmit connection acknowledgement and request to said first communications system wherein said connection acknowledgement and request uses said first connection information ~~for establishing new connection with said first communications system~~ as its first communications system destination information, and

enabling said first communications system to transmit a connection acknowledgement directly to said second communications system in response to receiving said connection acknowledgement and request from said second communications system.

24. (Currently Amended) The central communications station of claim 23 wherein:

said first connection information ~~for establishing a new connection with said first communications system~~ includes public Internet protocol address provided by said first network address translation device and port for said first communications system's next connection; and

said second connection information ~~for establishing a new connection with said second~~
~~communications system~~ includes public Internet protocol address provided by said second
network address translation device and port for said second communications system's next
connection.

25. (Currently Amended) A central communications station for enabling a first
communications system and a second communications system, respectively located behind a first
firewall and a second firewall to directly communicate with each other, wherein ~~each of said first~~
~~and second firewalls respectively~~firewall prevents communication initiated from an external data
network from reaching said first ~~or second~~ communications system and said second firewall
prevents communication initiated from an external data network from reaching said second
communications system, said central communications station comprising:

a secure connection interface that maintains secure connections with said first and second
communications systems through a network access to said external communications network;
and

a secure redirector that forwards connection information ~~of for~~ said second
communications system to said first communications system via said secure connection with said
first communications system thereby enabling said first communications system to transmit data
directly to said second communications system, wherein said data uses said connection
information ~~of for~~ said second communications system as its destination information and uses
connection information for said central communications station as its source information, said
data originating from said first communications system appearing to originate so as to appear as
if it had originated from said central communications station.

26. (Original) The central communications station of claim 25 wherein said connection information for said second communications system includes Internet protocol address and port of said second communications system and wherein said connection information for said central communications station includes Internet protocol address and port of said central communications station.

27. (Currently Amended) The central communications station of claim 25, wherein said secure redirector additionally forwards connection information ~~of~~ for said first communications system to said second communications system via said secure connection with said second communications system thereby enabling said second communications system to transmit data to said first communications system, wherein said data uses said connection information of said first communications system as its destination information and uses connection information for said central communications station as ~~its~~ source information, said data originating from said second communication system appearing to originate ~~so as to appear as if it had originated from~~ said central communications station.

28. (Original) The central communications station of claim 27 wherein said connection information for said first communications system includes Internet protocol address and port of said first communications system.

29. (Currently Amended) A central communications station for enabling a first communications system and a second communications system, respectively located behind a first

firewall and a second firewall and having respective associated first and second network address translation devices, to directly communicate with each other, wherein ~~each of said first and second firewalls respectively~~ firewall prevents communication initiated from an external data network from reaching said first ~~or second~~ communications system and said second firewall prevents communication initiated from an external data network from reaching said second communications system and wherein each of said first and second network address translation devices respectively provides public source information for outbound data originated from said first and second communications systems, said central communications station comprising:

a secure connection interface that maintains secure connections with said first and second communications systems via said external communications network through a network access;
and

a secure redirector that:

forwards ~~said second~~ connection information for establishing a new connection with said second communications system to said first communications system via said secure connection with said first communications system thereby enabling said first communications system to transmit a connection request to said second communications system wherein said connection request uses said connection information ~~for establishing new connection with said second communications system as its second communications system~~ destination information, and

forwards ~~said first~~ connection information for establishing a new connection with said first communications system to said second communications system via said secure connection with said second communications system, thereby:

enabling said second communications system to transmit connection acknowledgement and request from said second communications system to said first communications system

wherein said connection acknowledgement and request uses said first connection information for establishing new connection with said ~~first communications system~~ as its first communications system destination information, and

enabling said first communications system to transmit a connection acknowledgement directly from said first communications system to said second communications system.

30. (Currently Amended) The central communications station of claim 29 wherein:

said first connection information ~~for establishing a new connection with said first communications system~~ includes public Internet protocol address provided by said first network address translation device and port for said first communications system's next connection; and said second connection information ~~for establishing a new connection with said second communications system~~ includes public Internet protocol address provided by said second network address translation device and port for said second communications system's next connection.